

**IN THE CLAIMS:**

1. (Currently amended) An isolated nucleic acid molecule comprising a sequence of nucleotides encoding or complementary to a sequence encoding an amino acid sequence having homology to a regulator of gene expression or a derivative of said gene regulator, wherein said gene regulator is MCG7 having a guanine nucleotide exchange factor (GEF) activity or a derivative thereof.
2. (Withdrawn) An isolated nucleic acid molecule according to claim 1 wherein the regulator comprises a zinc finger domain of an  $(\text{HC}_3)_2$  type.
3. (Withdrawn) An isolated nucleic acid molecule according to claim 2 wherein the sequence of nucleotides or complementary sequence of nucleotides is selected from:
  - (i) a nucleotide sequence set forth in SEQ ID NO:2;
  - (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:3;
  - (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
  - (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).
4. (Currently cancelled) An isolated nucleic acid molecule according to claim 1 wherein said gene regulator is a guanine nucleotide exchange factor (GEF) or a derivative thereof.
5. (Currently amended) An isolated nucleic acid molecule according to claim 4 1 wherein the sequence of nucleotides is selected from the group consisting of:
  - (i) a nucleotide sequence set forth in SEQ ID NO:4 ~~or~~ 6;
  - (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:5 ~~or~~ 7;

- (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
- (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).

6. (Withdrawn) An isolated nucleic acid molecule according to claim 1, wherein said gene regulator is a heat shock protein or is a heat shock binding protein or a derivative thereof.

7. (Withdrawn) An isolated nucleic acid molecule according to claim 6, wherein the sequence of nucleotides is selected from:

- (i) a nucleotide sequence set forth in SEQ ID NO:8;
- (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:9;
- (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
- (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).

8. (Currently amended) A genetic construct comprising a vector portion and a gene portion comprising a nucleotide sequence encoding a regulator of gene expression or a derivative thereof, wherein said nucleotide sequence comprises an isolated nucleic acid molecule of Claim 5 operably linked to a promoter in said vector portion.

9. (Withdrawn) A genetic construct according to claim 8 wherein the gene portion comprises a zinc finger domain of (HC<sub>3</sub>)<sub>2</sub> type.

10. (Withdrawn) A genetic construct according to claim 9 wherein the gene portion comprises a nucleotide sequence selected from:

- (i) a nucleotide sequence set forth in SEQ ID NO:2;
- (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:3;
- (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
- (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).

11. (Currently cancelled) A genetic construct according to claim 8 wherein said gene portion is a nucleotide exchange factor (GEF) or derivative thereof.

12. (Currently cancelled) A genetic construct according to claim 11 wherein the gene portion comprises a nucleotide sequence selected from:

- (i) a nucleotide sequence set forth in SEQ ID NO:4 or 6;
- (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:5 or 7;
- (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
- (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).

13. (Withdrawn) A genetic construct according to claim 8 wherein the gene portion is a heat shock protein or a derivative thereof or a heat shock binding protein or derivative thereof.

14. (Withdrawn) A genetic construct according to claim 13 wherein the gene portion comprises a nucleotide sequence selected from:

- (i) a nucleotide sequence set forth in SEQ ID NO:8;
- (ii) a nucleotide sequence encoding an amino acid sequence set forth in SEQ ID NO:9;
- (iii) a nucleotide sequence having at least about 40% similarity to the nucleotide sequence of (i) or (ii); and
- (iv) a nucleotide sequence capable of hybridising under low stringency conditions to the nucleotide sequence set forth in (i), (ii) or (iii).

15. (Currently amended) A nucleic acid molecule encoding a gene regulator having the ~~identifying characteristics~~ GEF activity of a molecule selected from MCG4, MCG7 and MCG 18 having ~~respective~~ the amino acid sequences of ~~SEQ ID NO:3~~, SEQ ID NO: 5 ~~or 7~~ and ~~SEQ ID NO:9~~.

16. (Withdrawn) A method of detecting a condition caused or facilitated by an aberration in *mcg4*, said method comprising determining the presence of a single or multiple nucleotide substitution, deletion and/or addition or other aberration to one or both alleles of said *mcg4* wherein the presence of such a nucleotide substitution, deletion and/or addition or other aberration may be indicative of said condition or a propensity to develop said condition.

17. (Withdrawn) A method of detecting a condition caused or facilitated by an aberration in *mcg4*, said method comprising screening for a single or multiple amino acid substitution, deletion and/or addition to MCG4 wherein the presence of such a mutation is indicative of or a propensity to develop said condition.

18. (Withdrawn) A method for detecting MCG4 or a derivative thereof in a biological sample said method comprising contacting said biological sample with an antibody specific for MCG4 or its derivatives or homologues for a time and under conditions sufficient for an antibody-MCG4 complex to form, and then detecting said complex.

19. (Currently amended) A method of detecting a condition or a propensity to develop said condition caused or facilitated by an aberration in *mcg7*, said method comprising determining the presence of a single or multiple nucleotide substitution, deletion ~~and/or addition or other aberration~~ or a combination thereof to one or both alleles of said *mcg7*, wherein the presence of such a nucleotide substitution, deletion ~~and/or addition~~ or a combination thereof ~~or other aberration may be~~ is indicative of said condition or a propensity to develop said condition, and wherein *mcg7* has a nucleotide sequence set forth in SEQ ID NO:4.

20. (Withdrawn) A method of detecting a condition caused or facilitated by an aberration in *mcg7*, said method comprising screening for a single or multiple amino acid substitution, deletion and/or addition to MCG7 wherein the presence of such a mutation is indicative of or a propensity to develop said condition.

21. (Withdrawn) A method for detecting MCG7 or a derivative thereof in a biological sample said method comprising contacting said biological sample with an antibody specific for MCG7 or its derivatives or homologues for a time and under conditions sufficient for an antibody-MCG7 complex to form, and then detecting said complex.

22. (Withdrawn) A method of detecting a condition caused or facilitated by an aberration in *mcgl8*, said method comprising determining the presence of a single or multiple nucleotide substitution, deletion and/or addition or other aberration to one or both alleles of said *mcgl8* wherein the presence of such a nucleotide substitution, deletion and/or addition or other aberration may be indicative of said condition or a propensity to develop said condition.

23. (Withdrawn) A method of detecting a condition caused or facilitated by an aberration in *mcgl8*, said method comprising screening for a single or multiple amino acid substitution, deletion and/or addition to MCG18 wherein the presence of such a mutation is indicative of or a propensity to

develop said condition.

24. (Withdrawn) A method for detecting MCG18 or a derivative thereof in a biological sample said method comprising contacting said biological sample with an antibody specific for MCG 18 or its derivatives or homologues for a time and under conditions sufficient for an antibody-MCG 18 complex to form, and then detecting said complex.